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EXAMINER	
MULLER, BRYAN R	

ART UNIT	PAPER NUMBER
3723	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/537,382	BODDY ET AL.	
	Examiner	Art Unit	
	BRYAN R. MULLER	3723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 April 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,4-6,8-19,21-26,29 and 31-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,4-6,8-19,21-26,29 and 31-33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 April 2008* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *5/6/2008*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 5, 6, 8-10, and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Bass (1,833,961).

3. In reference to claim 1, Bass discloses (in second embodiment of Figs. 4 and 5) a head for a suction cleaner comprising a lower housing portion and an upper housing portion (27) that is movable relative to the lower housing portion between a closed position for use and an open position in which airflow passages within the head are opened from above, wherein the head is provided with at least on catch (28) to retain the upper housing portion in the closed position and releasable to move the upper housing portion into the open position and a rotatably mounted tool element (13/14) which is exposed form above, in front and below the tool element and readily removable when the upper housing portion is in the open position. The airflow passages of Bass lead from the bottom opening (11), up past brush (14) and upper housing portion (25). Thus, the airflow passages are clearly opened from above when the upper housing portion (25) is in the opened position. Further, a user would clearly have access to the tool element from above, in front or below the vacuum cleaner when the upper housing

is in the open position, thus, the tool element is exposed from above, in front and below the tool element.

4. IIn reference to claim 5, Bass further discloses that when the upper housing portion is in the closed position it defines, in combination with the lower housing portion, an airflow opening (11) which in use is adjacent the ground.

5. In reference to claim 6, Bass further discloses that the tool element (14) is located within the airflow opening.

6. In reference to claim 8, when the upper housing portion of Bass is in the open position, airflow paths within the head are accessible for cleaning or maintenance.

7. In reference to claim 9, Bass further discloses that the tool element is driven by a drive mechanism (16-19) and when the upper housing portion is in the open position, the drive mechanism is accessible for cleaning and maintenance.

8. In reference to claim 10, Bass further discloses that the tool element (14) is readily removable without the use of any tool. The tool element may clearly be removed simply by removing the belt from either of pulley 16 or 18 and moving the tool element out of sockets (15), which could inherently be done without the use of any tools.

9. In reference to claims 13, Bass further discloses that the drive mechanism includes an electric motor (2) within the head.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claims 4, 15, 17, 18, 23, 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bass (1,833,961) in view of Leathers (1,968,530).

12. In reference to claim 4, Bass discloses the vacuum head, as discussed supra. However, Bass fails to disclose that the vacuum head does not include a sole plate. Leathers discloses a similar vacuum head having a rotatably mounted tool element, and the head of Leathers does not include a sole plate, thus teaching that a suction head may be provided without a sole plate, which will reduce the structure that may interfere with the suction opening in the head or interfere with the rotatable tool element contacting the surface being cleaned. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made that the vacuum head of Bass may alternatively be formed without a sole plate, as taught by Leathers, to reduce the structure that may interfere with the suction opening in the head or interfere with the rotatable tool element contacting the surface being cleaned.

13. In reference to claim 15, Bass discloses the vacuum head, as discussed supra, wherein the drive mechanism includes a drive belt (19) comprising internal and external surfaces. However, Bass fails to disclose that the drive belt does not pass around the tool element. As discussed supra, Leathers discloses a similar vacuum head having a rotatably mounted tool element and Leathers also teaches a drive mechanism including an electric motor that drives a drive belt for the drive mechanism, but Leathers alternatively teaches that the drive belt does not pass around the tool element, which

will allow a user to more quickly and easily remove a worn belt or install a new belt without needing to remove the entire tool element from the head. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the drive belt and drive mechanism of Bass with the drive belt and drive mechanism of Leathers, which does not pass around the tool element to allow a user to more quickly and easily remove a worn belt or install a new belt without needing to remove the entire tool element from the head.

14. In reference to claims 17 and 18, Leathers further discloses that a circumferential drive surface (14) in the form of a pulley is provided on the tool element and that the external surface of the belt has a cross-section which cooperates with the pulley. The term "pulley" is defined as "a wheel driven by or driving a belt or the like, used to deliver force to a machine"[1]. In this case, the outer circumference (14) of tool element (12) that engages the belt is circular and thus, may be considered to be a wheel, which is driven by the belt to deliver rotational force to the tool element. Therefore, the drive surface (14) of Leathers is considered to be a pulley. Further, any cross-section taken of the belt will include at least a portion of the external surface of the belt, which cooperates with the pulley. Thus, the cross-section of the belt clearly cooperates with the pulley.

15. In reference to claim 23, Leathers further discloses that the drive mechanism includes a motor (1) having a drive wheel (6) which frictionally engages the drive belt.

16. In reference to claims 24 and 25, Leathers further discloses that the drive mechanism includes a freely rotatable support wheel (7) around which the drive belt

also passes, and which holds the drive belt adjacent to and in engagement with the tool element.

17. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bass (1,833,961) in view of Bewley (4,980,945) and Stone (3,924,085).

18. In reference to claims 11 and 12, Bass discloses the head for a suction cleaner of claims 1 and 9, as discussed supra, but fails to disclose that a switch is provided to prevent the drive mechanism from being operated when the upper housing portion is in the open position. However, it is old and well known for appliances and tools, especially those that are mass produced for commercial sale, to have some form of disconnect switch to prevent electrical shock or injury due to moving parts to users when an access panel or door is in an opened position for maintenance or repair. Additionally, Bewley discloses a head for a suction cleaner having an upper housing that may be opened to access the drive mechanism and tool element for repair and cleaning, as discussed supra, and Bewley further discloses that a safety device is desirable, that will disconnect electrical power to the components of the head when the upper housing portion is opened, to prevent a user from being shocked or injured due to user contact with exposed or moving components (Col. 5, lines 31-39). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the head of Bass with a safety device to prevent a user from being shocked or injured due to user contact with exposed or moving components, as taught by Bewley.

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[1] *Dictionary.com Unabridged (v 1.1)*

Additionally, Stone discloses a safety start device for domestic appliances wherein a switch (32) is provided on part of the housing, which will disconnect power to the components of the appliance to prevent operation when the door (14) of the appliance is in an opened position such that a user may contact moving parts in order to prevent injury to a user from contacting the moving components of the appliance. Further, the safety device of Stone provides the movable access door (14) with a protrusion (40) from an inner portion of the door, which contacts the switch (32) when the access door is moved to the closed position to allow the components of the appliance to operate when the door is closed. Therefore, it further would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the head of Bass with a similar safety device, as disclosed by Stone, to prevent a user from being shocked or injured due to user contact with exposed or moving components. Thus, it would have been obvious to provide the switch of Stone to the lower housing portion of Bass and to provide the upper housing portion (equivalent of the access door of Stone) with a protrusion that will only contact the switch when the upper housing portion is in the closed position.

19. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bass (1,833,961) in view of Worwag (2001/0008036).

20. In reference to claim 14, Bass discloses the head for a suction cleaner of claims 1 and 9, as discussed supra, but fails to disclose that a turbine may be provided within

the head. Worwag discloses a head for a suction cleaner having a rotatably mounted tool element that is driven by a drive mechanism and Worwag teaches that the power may be provided to the drive mechanism to drive the tool element by a turbine (12) that is positioned within the airflow path of the head or alternatively may be driven by an electric motor (paragraph 11). Therefore, it further would have been obvious to one of ordinary skill in the art at the time the invention was made that the electric motor in the drive mechanism of Bass may alternatively be replaced by a turbine that is positioned within the airflow paths of the head with an external source of suction or that a separate turbine may be provided in the path of the suction flow to drive the rotatable tool element, as taught by Worwag.

21. Claims 1, 9, 15, 16, 19, 21, 22, 24-26 and 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weber et al. (2002/0104185) in view of McCormick (6,226,832).

22. In reference to claim 1, Weber discloses a head for a suction cleaner that comprises upper and lower sections of the head housing and a rotatably mounted tool element. However, Weber fails to disclose that the upper housing portion is movable relative to the lower housing portion between a closed position for use and an open position in which airflow passages within the head are opened from above, wherein the head is provided with at least on catch to retain the upper housing portion in the closed position and releasable to move the upper housing portion into the open position and a rotatably mounted tool element which is exposed form above, in front and below the tool

element and readily removable when the upper housing portion is in the open position. McCormick discloses a head for a suction cleaner wherein the upper housing portion is attached to the lower housing portion such that the upper housing portion may quickly and easily be moved relative to the lower housing portion to an open position wherein airflow passages within the head are opened from above, which will allow a user to change the headlight, agitator and/or agitator drive belt, as well as clear debris from air passages or the agitator or agitator drive belt, by providing simple removal of parts without requiring the user to invert, tilt or otherwise manipulate the position of the entire suction cleaner (Col. 2, lines 45-53). Further, a user would clearly have access to the tool element of McCormick is exposed from above, in front or below the vacuum cleaner when the upper housing is in the open position, as seen in Fig. 4, thus, the tool element is exposed from above, in front and below the tool element. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the head of Weber with an upper housing portion that is movable relative to the lower housing portion between a closed position for use and an open position in which airflow passages within the head are opened from above and the tool element is exposed from above, in front or below the vacuum cleaner when the upper housing is in the open position, to allow a user to change the headlight, agitator and/or agitator drive belt, as well as clear debris from air passages or the agitator or agitator drive belt, by providing simple removal of parts without requiring the user to invert, tilt or otherwise manipulate the position of the entire suction cleaner, as taught by McCormick. McCormick further teaches that the head may be provided with at least one catch (86 or

96) to retain the upper housing portion in the closed position which is releasable without the use of any tool. Therefore, it further would have been obvious to provide the head of Weber with a similar catch to retain the upper housing portion in the closed position which is releasable without the use of any tool

23. In reference to claim 9, Weber further discloses that the tool element is driven by a drive mechanism (97-99 in Fig. 11 or 100, 102, 104, 106, 108, 110, 112 in Fig. 12) and in view of the disclosure of McCormick that the openable upper housing section allows a user to replace the drive belt, it further would have been obvious that at least the belt (97 or 110) and the drive wheels of the drive mechanism of Weber would be accessible for cleaning or maintenance such as replacing the drive belt when the upper housing portion is in the opened position.

24. In reference to claim 15, Weber further discloses that the drive mechanism (embodiments in Figs. 11 and 12) includes a drive belt (97 or 110) having internal and external surfaces, and wherein the drive belt does not pass around the tool element. The embodiments in Figs. 11 and 12 of Weber both comprise two tool elements, wherein the drive belt only passes around one of the tool elements. Thus, the drive element being referred to above is the front tool element that does not have the drive belt passing around it.

25. In reference to claim 16, Weber further discloses (in embodiment of Fig. 12) that the drive mechanism includes a drive pinion (on the front tool element; not numbered) provided on the tool element, and the drive belt is toothed (paragraph 40) on its external

surface (shown in Fig. 12 as being toothed on the internal and external surfaces) and engages the drive pinion.

26. In reference to claim 19, Weber further discloses that the drive mechanism includes an electric motor (106) which drives a motor pinion (100; via belt 102 and axle 104) engaging the belt (110).

27. In reference to claim 21, Weber further discloses that the drive belt is toothed on its internal surface, as discussed supra, passes around and engages with the motor pinion, as shown in Fig. 12.

28. In reference to claim 22, in the embodiment of Fig. 12, Weber discloses that the tool element may be driven by the belt passing around a drive pinion such that the internal surface of the drive belt engages the drive pinion or alternatively that the tool element may be driven by an external surface of the drive belt engaging the drive pinion wherein the drive belt does not pass around the tool element such that the tool elements rotate in opposite directions. Therefore, Weber teaches that a drive belt may engage pinions of a drive mechanism with the inner or outer surface. Therefore, it further would have been obvious that the drive mechanism of Weber may alternatively be configured such that the motor pinion engages an outer surface of the drive belt to rotate the drive belt in an opposite direction for different applications, adapt the drive mechanism to fit in different sized heads, or to provide a driving mechanism for tool elements having different locations relative to the motor. Thus, it would have been obvious that the motor pinion of Weber may alternatively engage the toothed outer surface of the drive belt. Alternatively, gear wheel 108 may also be considered to be a

pinion, which is driven by the electric motor by way of the belt and the pinion does engage a toothed external surface of the drive belt.

29. In reference to claim 24, Weber further discloses that the drive mechanism further includes a support wheel (112) around which the drive belt passes, and which holds the drive belt adjacent to and in engagement with the tool element.

30. In reference to claim 25, it is further obvious that the support wheel is freely rotatable to reduce any drag or resistance on the drive belt that may reduce the efficiency of the drive mechanism.

31. In reference to claim 26, Weber further discloses that the support wheel (112) is a gear, and thus, obviously has teeth, which may also be considered to be a pinion.

32. In reference to claims 31-33, the combination of Weber and McCormick, as discussed supra in reference to claims 1, 15, 19 and 22 provides all of the limitations set forth in claims 31-33.

33. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bewley (4,980,945).

34. Bewley discloses a cleaning apparatus that is adapted for use with a suction cleaner (12), the cleaning apparatus comprising a connector (84, 86) adapted to be removably connected to a wand (15/20) of the suction cleaner, a lower housing portion (66) secured to the connector (when assembled for use; Fig. 1) and having ground engaging wheels and an upper housing portion (76) secured to the connector (when assembled for use; Fig. 1), wherein the lower housing portion provides support for a

rotatably mounted brush bar (72), and the upper housing is pivotable (Col. 5, lines 8-10) relative to the lower housing portion between a closed position and an open position in which the brush bar is exposed from above, in front (as seen in Fig. 7) and below through the suction opening. Although Bewley does not specifically disclose that the brush bar is exposed from the front, it appears from figure 7 that a user would be able to view or engage at least a portion of the brush bar from the front of the head, thus exposing the brush bar from the head.

Response to Arguments

35. Applicant's arguments with respect to the rejections under 35 U.S.C. 102(b) and 103(a) in view of Leathers have been considered but are moot in view of the new ground(s) of rejection.

36. Applicant's arguments filed 4/10/2008 have been fully considered but they are not persuasive. The applicant first argues that none of Bass, McCormick or Bewley disclose that the rotatable brush is exposed from above, in front and below the brush element. However, it is inherent that a user may view or engage at least a portion of the brush of Bass from above, as well as in front and below, because the brush extends further towards the front than the hinge for the upper housing. Therefore, at least a portion of the brush may be engaged and is thus, exposed, from above. Similarly, it is inherent that a user may view or engage at least a portion of the brush of McCormick from in front, as well as in above and below, because the brush extends further towards the top than the portion of the lower housing that is positioned in front of the brush, as

seen in Fig. 4. Therefore, at least a portion of the brush may be engaged and is thus, exposed, from in front of the brush. Finally, as discussed supra, it appears to be obvious that a user may view or engage at least a portion of the brush of Bewley from in front, as well as in above and below, because the brush extends further towards the top than the portion of the lower housing that is positioned in front of the brush, as seen in Fig. 7. The claims do not disclose that the entire brush is exposed and it would further be possible for a user to engage the tool with their fingers or a tool from above, below or in front of the brush, even when the lower housing is positioned in front of the brush, which may be considered to define the front of the brush as exposed.

37. Finally, the applicant argues that Weber fails to disclose a pinion that is driven by the motor that engages the external surface of the belt. However, as discussed in the previous Office Action and above, the Weber reference does make it obvious that a similar tool may be formed such that a pinion directly driven by the electric motor may engage the outer surface of the drive belt, or as discussed supra, drive gear 108 of Weber may be considered to be a pinion that is driven by the motor that engages the external surface of the belt.

38. Therefore, the Examiner maintains all of the above rejections, which have been argued by the applicant.

Conclusion

39. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Allgeier et al. (6,513,190), Kajihara (5,659,919), Kramer et al.

(5,651,362), Becker (2,253,997), Hampton et al. (5,414,893), Burrage (2,910,721), Fillery (3,482,276), Gage (2,482,166) and Magarian (2,963,270) all disclose vacuum heads or cleaning apparatuses having similar structure and/or function as the applicant's claimed invention.

40. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRYAN R. MULLER whose telephone number is (571)272-4489. The examiner can normally be reached on Monday thru Thursday and second Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph J. Hail III can be reached on (571) 272-4485. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/B. R. M./
Examiner, Art Unit 3723
7/7/2008

/Joseph J. Hail, III/
Supervisory Patent Examiner, Art Unit 3723